

## **Appendix K-Watershed Strategies for FS/EPA/ODEQ Non-Point Source Pollution Strategy, BMP Implementation, and TMDL/WQRP Requirements**

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Mary Lou Welby, hydrologist

Comments were received on a number of aspects of the Clean Water Act and water quality as they related to the DEIS for the Flagtail Fire Recovery Project. Some comments addressed how the Forest Service implements the Clean Water Act. Other comments addressed how the Clean Water Act would be implemented in the Flagtail project area. Other comments addressed effects of activities proposed in Flagtail and how these effects relate to compliance with the Clean Water Act. It appears that the commenters and the Malheur National Forest's interpretations of Clean Water Act implementation and compliance in the Flagtail project area differ.

Because of the variety comments relating to the implementation of the Clean Water Act and activities proposed in the Flagtail Fire Recovery DEIS and the complexity of applying the Clean Water Act where there is potential for nonpoint source pollution, a two part response to comments was developed. The first part reviews and summarizes regulation/direction/guidance/policies/frameworks related to Forest Service implementation of the Clean Water Act. This part may be regarded as an extension of the Watershed Regulatory Framework section of the DEIS. The second part is composed of responses to specific comments. This part also is a summary and site-specific review of the Malheur National Forest's implementation of the Clean Water Act in the Flagtail project area, based on the expansion of the Watershed Regulatory Framework.

In addition to this response, the discussion of BMPs has been clarified and expanded in the FEIS.

### **PART 1. REVIEW AND SUMMARY OF FOREST SERVICE IMPLEMENTATION OF THE CLEAN WATER ACT.**

This section is based on a review of the documents contained in Literature Cited. .

#### **A. GENERAL WATER QUALITY**

1. State Water Quality Standards apply to both point source and non-point source pollution.
2. Pollution generated from forestry-related (broadly defined - silvicultural) activities is considered non-point source pollution (NPS).
3. NPS is controlled (minimized) through the application of BMPs or systems of BMPs in accordance with many published studies.

4. BMPs or systems of BMPs control or minimize NPS; they do not reduce it to zero, nor are they required to.
5. Controlling or minimizing non-point pollution through the use of BMPs meets WQ standards based on guidance from EPA (2001). BMPs are considered to be technology-based, not standard based; see items 6 and 7 below.
6. Implementing BMPs is considered to be meeting State standards (USDA-Forest Service).
7. Monitoring is required to be sure that BMPs are implemented as implementation is “proof” of meeting WQ standards (Diaz-Soltero, October 24, 2000).
8. Monitoring is also required to be sure that pollution is minimized by the selected and implemented BMPs.
9. In addition to BMPs, some forestry-related pollution is permitted under terms of COE Basic Permits and/or Exemptions, Nationwide Permits, or Regional Permits and under DSL Basic Requirements and/or Exemptions or General Authorizations. These permits, requirements, and exemptions require compliance with BMPs to control NPS. Culvert replacement and removal are covered under such permits or exemptions. These exemptions usually allow for limited, episodic releases which can be clearly defined in space and time.

#### B. CLEAN WATER ACT SECTION 303(d) LIST OF WATER QUALITY IMPAIRED WATERBODIES

1. Additional regulations apply to water quality impaired waterbodies on the State 303(d) list.
2. TMDLs are required when activities have the potential to impact listed streams; in the case of Flagtail, temperature is the only parameter for which a TMDL need be considered.
3. State has responsibility for completing TMDLs. The TMDL for the Silvies River is not scheduled until 2007 (Oregon, 2004b).
4. Regardless of whether a TMDL is done, FS policy/direction is that WQRP is to prepared for listed waters whenever proposed activities have potential to impact impaired waters (requires listing to be recognized as impaired) or evidence of “sufficiently stringent” measures in place in other documents is required to provide evidence that further impacts would not occur. In the case of Flagtail, temperature is the only parameter for which a WQRP need be considered.

5. By extension, when no measurable effect occurs, the effect cannot be described and there is no need to implement the protocol for 303(d) listed streams and the associated decision framework.

## **PART 2. RESPONSE TO SPECIFIC COMMENTS:**

This section responds to the specific comments made on topics related to the Clean Water Act. The comments were made primarily by two groups, Northwest Environmental Defense Center (NEDC) and Oregon Natural Resources Council (ONRC).

Responses to the following comments are incorporated here: NEDC (Letter 10) Comments numbered 26, 27, 28, 29, 33, 49, 51, 53, 69, and 86 and ONRC (Letter 11) Comments numbered 36 and 37.

The following responses integrate the Forest Service strategy to implement the Clean Water Act (as reviewed in Section 1 above) with the comments listed above.

### **A. GENERAL WATER QUALITY**

1. Nonpoint source pollution from broadly defined silvicultural activities would be controlled and minimized by the implementation of BMPs and systems of BMPs and mitigations as described in Chapter 2 and Appendix F. These BMPs are commonly recognized as effective at controlling non-point source pollution. ( US EPA, 2001).
2. Between the DEIS and the FEIS, the project soil scientist ran Disturbed WEPP to estimate soil movement under various storm conditions in two units which represented the two steepest classes of tractor yarding on ground which burned with moderate to high severity. Skyline and helicopter yarding were not modeled because, although they commonly occur on steeper ground, the amount of ground disturbance associated with either method of yarding is substantially less than with tractor or ground-based systems (see Soils Effects Analysis). Soil movement is usually proportional to the amount of ground cover (which is proportional to the severity of burn in Flagtail) and to slope steepness. Tractor units in other classes of slope and burn severity would be expected to have less soil movement than in the two that were modeled.

The results of the modeling indicated that under the most common precipitation events (one to four year storms, nearly 80% of the time), BMPs included in the DEIS would function so that soil disturbed by ground-based yarding would remain within units and would not be transported to unit boundaries or only trace amounts would be transported. Given these results, BMPs were evaluated and additional ones prescribed as described in the Watershed Effects section. Also, it was recognized that because of the variability associated with both sediment studies and modeling, monitoring of BMPs would provide information on whether or not BMPs needed to be revised, consistent with direction from the Forest Service (USDA Forest Service, undated, "Framework...") and in the MOU between the State of Oregon and the Forest Service (USDA-Forest Service, 2002)

## B. CLEAN WATER ACT SECTION 303(d) LIST OF WATER QUALITY IMPAIRED WATERBODIES

1. Only one stream segment (Snow Creek) in the Flagtail Fire Recovery Project area is included on the State 303(d) List of Water Quality Impaired Waterbodies. Snow Creek is listed for only one parameter - temperature. The listed segment of the Silvies River is located too far downstream to be measurably affected by activities in the Flagtail project area. There are no activities proposed for the adjacent Scotty Creek drainage, also located in the Upper Silvies Watershed.
2. TMDL development for the Silvies River is the responsibility of the State and is not scheduled to be completed until 2007. The Forest Service, through an MOU with the State, has demonstrated its willingness to support and assist with the development of the TMDL.
3. When streams managed by the Forest Service are included on the State 303(d) List of Water Quality Impaired Waterbodies and there is the possibility of a water quality standard violation, the Forest Service has responsibility to conduct an assessment. The criterion for this determination is whether or not proposed activities have the potential to impact the parameter for which the stream is listed (i.e. summer rearing temperature). If it is determined that there is potential for the proposed activity (ies) to violate water quality standards, then the assessment continues as described below.

For Snow Creek, it was determined that the proposed activities *do not* have the potential to impact the listed stream segment because

Short term (up to 6-9 years) effects on the temperature of Snow Creek, resulting from the proposed activities, are not expected to be measurable due to the small amount of shade removed and due to the sensitivity of available field monitoring equipment. Changes that are not measurable cannot be described in detail. The proposed activities, which may result in short term UNMEASURABLE effects on stream temperature, would result in long term (greater than 6-9 years) decreases in temperature and improvement in other water quality parameters by removing road features adjacent to or crossing Snow Creek. While removing up to 3% of potential shade, which is provided by the remaining boles of fire-killed trees adjacent to a segment (0.8 mi.) of road 2400133, during proposed road obliteration and recontouring, and the shade provided by a culvert at the 2400203 Snow Creek crossing during decommissioning, may intuitively affect stream temperature, the amount of shade proposed for removal would not result in a technologically measurable increase in stream temperature. Cumulatively hardwoods and conifers planted in RHCA's in spring of 2003 and 2004, natural regeneration of stream side vegetation, and placement of coarse woody material would provide increased stream shade in 6-9 years. This increase in shade would intuitively result in a decrease in stream temperature, probably still unmeasurable at this point in time. Measurable changes in stream temperature may not be

- evident for about 30 years when the height of conifers would be expected to provide maximum shade to Snow Creek and subsurface flows would have recovered following road decommissioning under three action alternatives. The existing condition of both Watershed and Fisheries describe the presence of stream side conifers along Snow Creek.
4. If it is determined that an assessment is required, the first step of the assessment is to determine if the violation is management related.
  5. The second step of the assessment is to determine whether or not “*sufficiently stringent measures*” are in place to mitigate effects of proposed activities in a timely manner. The assessment also includes an examination of the complexity of the problem.
  6. If “sufficiently stringent measures” are not in place, then “solution development” occurs. Solution development determines the approach to be used in compiling a WQRP. A WQRP can be in one of several formats and may be incorporated into another document. A determination can be made whether or not the current document constitutes a WQRP, or whether or not a Water Quality Restoration Plan is required, regardless of whether or not a TMDL is completed.
  8. Recognizing that a WQRP would be completed in support of the Silvies River TMDL in 2007 (Oregon, 2004b), planning documents recently completed for the Flagtail project area or expected to be completed in the foreseeable future were assessed for the components of a WQRP. This assessment is summarized in Appendix L, Part 2. The current FEIS is organized so that it, along with other planning documents for the Flagtail area, provide the components that constitute a WQRP for this portion of the Upper Silvies Watershed, as described in Appendix L.
  9. The final step of the decision framework is implementation and monitoring of the solution. The Project Schedule in Chapter 2 of the FEIS and Appendix J constitute an implementation schedule; some activities have been initiated. Monitoring is described in Chapter 2 of the FEIS and in other documents which contain components of a WQRP.
  10. No other stream segments in the Flagtail Fire Recovery Project area are included on the State 303(d) List of Water Quality Impaired Waterbodies for any parameter. The Existing Condition of the DEIS and FEIS and the Upper Silvies Watershed Assessment include descriptions of water quality conditions. Effects of proposed activities on these conditions were disclosed in the Watershed Environmental Consequences, Water Quality section, of the DEIS, as required by NEPA.